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10/671,874	09/29/2003	Yoshimitsu Namioka	62807-143	5406

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EXAMINER	
ALI, FARHAD	
ART UNIT	PAPER NUMBER
2146	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,874	NAMIOKA ET AL.	
	Examiner	Art Unit	
	FARHAD ALI	2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikunen et al. (US 2005/0165939) hereinafter Nikunen, in view of Nagamine et al. (US 4,773,040) hereinafter Nagamine.

Claim 13

Nikunen teaches a data communication method, comprising the steps of:

transmitting data from the first computer to the second computer in a manner that data transmission from the second computer to the first computer is restricted by coupling a transmission terminal of the transmission side connector to a reception terminal of the reception side connector and disconnecting a reception terminal of the transmission side connector from a transmission terminal of the reception side connector **([Nikunen] Paragraph [0027], "the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment" and Paragraph [0036] "FIG. 5 illustrates a preferred embodiment of a one-way data transfer device. The one-way data transfer device 12' of FIG. 5 may be used in place of the one-way data**

transfer device 12 in the embodiments of FIGS. 2 to 4 if the process control network employs a data transfer protocol requiring an acknowledgement. Blocks 15 to 17 of the data transfer device 12' of FIG. 5 may be implemented by circuits, a computer program or a combination thereof").

Nikunen does not specifically disclose providing a transmission side connector at a first computer, providing a reception side connector at a second computer, the monitoring a signal of the first computer by the first computer by coupling the transmission terminal of the transmission side connector to the reception terminal of the transmission side connector to confirm a connection state therebetween; and transmitting a signal representing data reception at the second computer to the first computer via a signal line physically different from a signal line for transmitting data to the second computer from the first computer.

Nagamine discloses a data transmission method wherein **"In response to receipt of the low-level data transmission signal (DS), the receiving side reads the (i+1)th item of data (DT.sub.i+1) and sends a low-level data reception signal (DR) to the transmitting side. The transmitting side ends the transmission cycle for the (i+1)th item of data upon receiving the low-level data reception signal (DR)" (Abstract)**. In Figure 4, **Ls** (the data transmission signal) and **Lr** (the data reception signal) are clearly indicated by two physically different paths. Also, In Figure 4, **204a-m, 207, and 208** are Transmitting side connectors and **305a-m, 301, and 307** are receiving side connectors.

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Nagamine's data transmission method. Nagamine's low-level data signals are a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Nagamine's method of sending an acknowledgement signal with Nikunen's data communication method would add further security, reliability, and accessibility to the Nikunen's data communication method.

Claim 14

Nikunen teaches an data communication method, comprising the steps of:

transmitting data from the first computer to the second computer in a manner that data transmission from the second computer to the first computer is restricted by coupling a transmission terminal of other polarity side of the transmission side connector to a reception terminal of other polarity side of the reception side connector and disconnecting a reception terminal of the transmission side connector from a transmission terminal of the reception side connector **([Nikunen] Paragraph [0027], "the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment" and Paragraph [0036] "FIG. 5 illustrates a preferred embodiment of a one-way data transfer device. The one-way data transfer device 12' of FIG. 5 may be used in place of the one-way data transfer device 12 in the embodiments of FIGS. 2 to 4 if the process control network employs a data transfer protocol**

requiring an acknowledgement. Blocks 15 to 17 of the data transfer device 12' of FIG. 5 may be implemented by circuits, a computer program or a combination thereof").

Nikunen does not specifically disclose providing a transmission side connector at a first computer, providing a reception side connector at a second computer, coupling a transmission terminal of one polarity side of the transmission side connector to a reception terminal of one polarity side of the reception side connector, and monitoring a signal of the first computer by the first computer by coupling the transmission terminal of the one polarity side of the transmission side connector to the reception terminal of the one polarity side of the transmission side connector and coupling the transmission terminal of the other polarity side of the transmission side connector to the reception terminal of the other polarity side of the transmission side connector to confirm a connection state therebetween; and transmitting a signal representing data reception at the second computer to the first computer via a signal line physically different from a signal line for transmitting data to the second computer from the first computer, wherein coupling between the transmission terminal of the one polarity side of the transmission side connector and the reception terminal of the one polarity side of the reception side connector and coupling between the transmission terminal of the other polarity side of the transmission side connector and the reception terminal of the other polarity side of the reception side connector are realized by a physically common communication line.

Nagamine discloses a data transmission method wherein **"In response to receipt of the low-level data transmission signal (DS), the receiving side reads the**

(i+1)th item of data (DT.sub.i+1) and sends a low-level data reception signal (DR) to the transmitting side. The transmitting side ends the transmission cycle for the (i+1)th item of data upon receiving the low-level data reception signal (DR)" (Abstract). In Figure 4, **Ls** (the data transmission signal) and **Lr** (the data reception signal) are clearly indicated by two physically different paths. Also, In Figure 4, **204a-m, 207, and 208** are Transmitting side connectors and **305a-m, 301, and 307** are receiving side connectors.

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Nagamine's data transmission method. Nagamine's low-level data signals are a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Nagamine's method of sending an acknowledgement signal with Nikunen's data communication method would add further security, reliability, and accessibility to the Nikunen's data communication method.

Claim 15

Nikunen teaches an information processing apparatus as a first computer which comprises:

a data transmission processing unit for transmitting data to a second computer,

a transmission terminal of one polarity side of the transmission side connector of the first computer is coupled to a reception terminal of one polarity side of a reception side connector, data is transmitted from the data transmission processing unit to the

second computer in a manner that data transmission from the second computer to the first computer is restricted by coupling a transmission terminal of other polarity side of the transmission side connector to a reception terminal of other polarity side of the reception side connector and disconnecting a reception terminal of the transmission side connector from a transmission terminal of the reception side connector **([Nikunen] Paragraph [0027], "the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment" and Paragraph [0036] "FIG. 5 illustrates a preferred embodiment of a one-way data transfer device. The one-way data transfer device 12' of FIG. 5 may be used in place of the one-way data transfer device 12 in the embodiments of FIGS. 2 to 4 if the process control network employs a data transfer protocol requiring an acknowledgement. Blocks 15 to 17 of the data transfer device 12' of FIG. 5 may be implemented by circuits, a computer program or a combination thereof").**

Nikunen does not specifically disclose an input unit for inputting a signal representing data reception at the second computer, and a transmission side connector, wherein: a signal of the first computer is monitored by the first computer by coupling the transmission terminal of the one polarity side of the transmission side connector to the reception terminal of the one polarity side of the transmission side connector and coupling the transmission terminal of the other polarity side of the transmission side connector to the reception terminal of the other polarity side of the transmission side connector to confirm a connection state therebetween, a signal representing data

reception at the second computer is inputted to the input unit via a signal line physically different from a signal line for transmitting data to the second computer from the first computer, and coupling between the transmission terminal of the one polarity side of the transmission side connector and the reception terminal of the one polarity side of the reception side connector and coupling between the transmission terminal of the other polarity side of the transmission side connector and the reception terminal of the other polarity side of the reception side connector are realized by a physically common communication line.

Nagamine discloses a data transmission method wherein **"In response to receipt of the low-level data transmission signal (DS), the receiving side reads the (i+1)th item of data (DT.sub.i+1) and sends a low-level data reception signal (DR) to the transmitting side. The transmitting side ends the transmission cycle for the (i+1)th item of data upon receiving the low-level data reception signal (DR)" (Abstract)**. In Figure 4, **Ls** (the data transmission signal) and **Lr** (the data reception signal) are clearly indicated by two physically different paths. Also, In Figure 4, **204a-m, 207, and 208** are Transmitting side connectors and **305a-m, 301, and 307** are receiving side connectors.

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Nagamine's data transmission method. Nagamine's low-level data signals are a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Nagamine's method of sending an acknowledgement signal with Nikunen's data communication method would

add further security, reliability, and accessibility to the Nikunen's data communication method.

Claim 16

Nikunen teaches an information processing apparatus as a first computer which comprises:

a data transmission processing unit for transmitting data to a second computer,

a signal is transmitted from the data transmission processing unit to the second computer in a manner that data transmission from the second computer to the first computer is restricted by coupling a transmission terminal of the transmission side connector to a reception terminal of a reception side connector of the second computer and disconnecting a reception terminal of the transmission side connector from a transmission terminal of the reception side connector **([Nikunen] Paragraph [0027], "the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment" and Paragraph [0036] "FIG. 5 illustrates a preferred embodiment of a one-way data transfer device. The one-way data transfer device 12' of FIG. 5 may be used in place of the one-way data transfer device 12 in the embodiments of FIGS. 2 to 4 if the process control network employs a data transfer protocol requiring an acknowledgement. Blocks 15 to 17 of the data transfer device 12' of FIG. 5 may be implemented by circuits, a computer program or a combination thereof").**

Nikunen does not specifically disclose an input unit for inputting a signal representing data reception at the second computer, and a transmission side connector, wherein: a signal of the first computer is monitored by the first computer by coupling the transmission terminal of the transmission side connector to the reception terminal of the transmission side connector to confirm a connection state therebetween; and a signal representing data reception at the second computer is inputted to the input unit via a signal line physically different from a signal line for transmitting data to the second computer from the first computer.

Nagamine discloses a data transmission method wherein **"In response to receipt of the low-level data transmission signal (DS), the receiving side reads the (i+1)th item of data (DT.sub.i+1) and sends a low-level data reception signal (DR) to the transmitting side. The transmitting side ends the transmission cycle for the (i+1)th item of data upon receiving the low-level data reception signal (DR)" (Abstract)**. In Figure 4, **Ls** (the data transmission signal) and **Lr** (the data reception signal) are clearly indicated by two physically different paths. Also, In Figure 4, **204a-m, 207, and 208** are Transmitting side connectors and **305a-m, 301, and 307** are receiving side connectors.

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Nagamine's data transmission method. Nagamine's low-level data signals are a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Nagamine's method of sending an acknowledgement signal with Nikunen's data communication method would

add further security, reliability, and accessibility to the Nikunen's data communication method.

Response to Arguments

3. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHAD ALI whose telephone number is (571)270-

1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farhad Ali/
Examiner, Art Unit 2146

/JEFF PWU/
Supervisory Patent Examiner, Art Unit 2146